ABSTRACT

A ceramic filter for trapping and combusting diesel exhaust particulates composed of an end-plugged cordierite honeycomb structure exhibiting a pore size distribution as determined by mercury porosimetry in which the quantity $d_{50}/(d_{50} + d_{90})$ as related to pore size distribution is less than 0.70, a soot loaded permeability factor S_f, as defined by the equation $[d_{50}/(d_{50} + d_{90})]/[\%porosity/100]$, of less than 1.55, and, a coefficient of thermal expansion (25-800°C) of no greater than 17 x 10^{-7}/°C. The ceramic filter further exhibits a median pore diameter, d_{50}, of at least 4 micrometers and up to 40 micrometers. A method of making the filter is provided.